JVC

SERVICE MANUAL

COLOUR TELEVISION

BASIC CHASSIS
JK

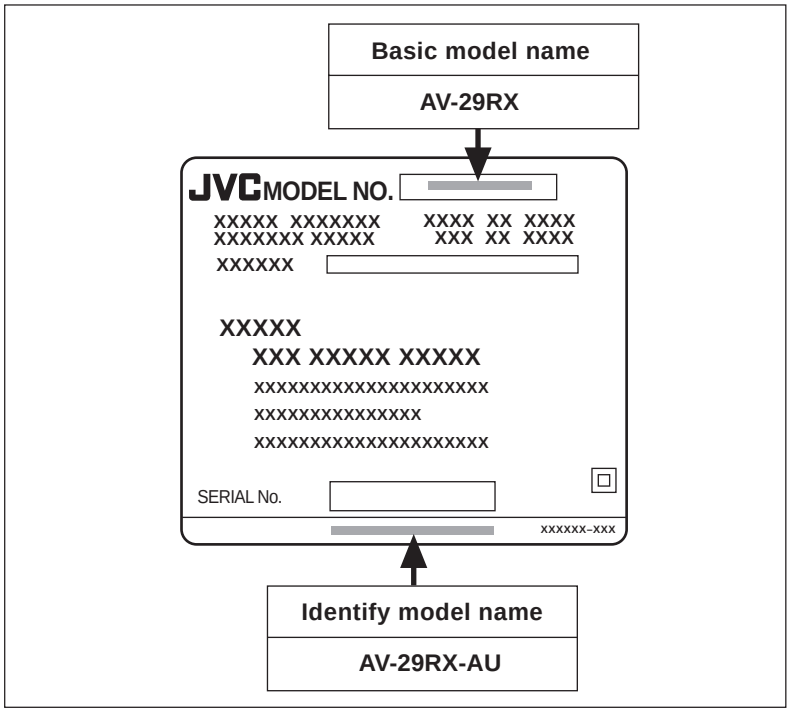
AV-29RX(AU)

This service manual mainly consists of the following items:
• The items which differ from those for the AV-29RS service manual.
• The initial value for each setting item.
For details other than those described in this manual, please refer to the following service manual.
Reference Service Manual: AV-29RS Service Manual (No. 51730, Jul. 2000)

Note: The page in parentheses shows the one for the AV-29RS service manual (No. 51730, Jul. 2000).

HOW TO IDENTIFY MODEL

While referring to the illustration given below, identify model name on the rating label affixed to the rear cover.



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No. 56045
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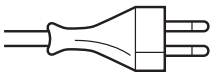
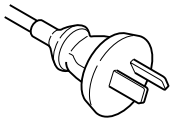
PARTS DIFFERENCE TABLE

The different parts between AV-29RS and AV-29RX(AU) are described below:

⚠	REF. NO.	AV-29RS PART No.	AV-29RX(AU) PART No.	PART NAME	DESCRIPTION
■ **EXPLODED VIEW PARTS LIST (Pages 35 and 36)**					
⚠	13	QMP40D0-200J5 or QMP40D0-200J3 	**QMP2980-185J5** 	POWER CORD	
⚠	16	LC20377-001B-H	**LC20377-013A-H**	RATING LABEL	
	34	CM34837-048-H	**CM34837-055-H**	STICK SHEET	
	37	LC10762-001B-H	**LC10762-003B-H**	FRONT CABINET	
	38	LC20532-003B-H	**LC20532-008B-H**	DOOR	
■ **PRINTED WIRING BOARD PARTS LIST [MAIN PWB ASSY] (Page 38-)**					
	—	SJK-1003A-H2	**SJK-1004A-H2**	MAIN PWB ASSY	
	R1010	NRSA02J-222X	———	CH MG R	2.2kΩ 1/10W J
	R1011	NRSA02J-122X	———	CH MG R	1.2kΩ 1/10W J
	R1012	NRSA02J-331X	———	CH MG R	330Ω 1/10W J
	R1013	NRSA02J-270X	———	CH MG R	27Ω 1/10W J
	R1014	NRSA02J-271X	———	CH MG R	270Ω 1/10W J
	R1015	NRSA02J-102X	———	CH MG R	1kΩ 1/10W J
	R1329	NRSA02J-102X	———	CH MG R	1kΩ 1/10W J
		———	**NRSA02J-0R0X**	CH MG R	0.0Ω 1/10W J
	R1330	NRSA02J-472X	———	CH MG R	4.7kΩ 1/10W J
		———	**NRSA02J-0R0X**	CH MG R	0.0Ω 1/10W J
	R1871	NRSA02J-102X	———	CH MG R	1kΩ 1/10W J
	R1872	NRSA02J-222X	———	CH MG R	2.2kΩ 1/10W J
	R1873	NRSA02J-222X	———	CH MG R	2.2kΩ 1/10W J
	R1874	NRSA02J-272X	———	CH MG R	2.7kΩ 1/10W J
	R1875	NRSA02J-0R0X	———	CH MG R	0.0Ω 1/10W J
	R1876	NRSA02J-102X	———	CH MG R	1kΩ 1/10W J
	R1877	NRSA02J-393X	———	CH MG R	39kΩ 1/10W J
	R1878	NRSA02J-182X	———	CH MG R	1.8kΩ 1/10W J
	R1879	NRSA02J-182X	———	CH MG R	1.8kΩ 1/10W J
	R1880	NRSA02J-182X	———	CH MG R	1.8kΩ 1/10W J
	R1881	NRSA02J-181X	———	CH MG R	180Ω 1/10W J
	R1882	NRSA02J-181X	———	CH MG R	180Ω 1/10W J
	R1883	NRSA02J-102X	———	CH MG R	1kΩ 1/10W J
	R1884	NRSA02J-181X	———	CH MG R	180Ω 1/10W J
	C1012	NCB21HK-472X	———	CH C CAP.	4700pF 50V K

⚠	REF. NO.	AV-29RS PART No.	AV-29RX(AU) PART No.	PART NAME	DESCRIPTION
■ PRINTED WIRING BOARD PARTS LIST [MAIN PWB ASSY]-Continued (Page 38-)					
	C1013	NCB21HK-472X	———	CH C CAP.	4700pF 50V K
	C1324	QETN1HM-105Z	———	E CAP.	1µF 50V M
	C1325	QETN1HM-105Z	———	E CAP.	1µF 50V M
	C1326	QETN1HM-105Z	———	E CAP.	1µF 50V M
	C1334	———	**NCB21HK-103X**	CH C CAP.	0.01µF 50V K
	C1335	———	**NCB21HK-103X**	CH C CAP.	0.01µF 50V K
	C1336	———	**NCB21HK-103X**	CH C CAP.	0.01µF 50V K
	C1871	NCB21EK-104X	———	CH C CAP.	0.1µF 25V K
	C1872	NCB21HK-223X	———	CH C CAP.	0.022µF 50V K
	C1873	NDC21HJ-221X	———	CH C CAP.	220pF 50V J
	C1874	NDC21HJ-150X	———	CH C CAP.	15pF 50V J
	C1875	NDC21HJ-150X	———	CH C CAP.	15pF 50V J
	C1876	NDC21HJ-221X	———	CH C CAP.	220pF 50V J
	C1877	NCB21EK-104X	———	CH C CAP.	0.1µF 25V K
	C1878	NCB21HK-102X	———	CH C CAP.	1000pF 50V K
	C1879	NDC21HJ-221X	———	CH C CAP.	220pF 50V J
	C1880	QETN1AM-477Z	———	E CAP.	470µF 10V M
	C1881	NCB21EK-104X	———	CH C CAP.	0.1µF 25V K
	C1882	QETN1EM-476Z	———	E CAP.	47µF 25V M
	C1883	NCB21HK-103X	———	CH C CAP.	0.01µF 50V K
	C1884	NCB21EK-104X	———	CH C CAP.	0.1µF 25V K
	C1885	NCB21EK-104X	———	CH C CAP.	0.1µF 25V K
	C1886	NCB21HK-103X	———	CH C CAP.	0.01µF 50V K
	L1871	QQL244K-4R7Z	———	PEAKING COIL	4.7µH K
	L1872	QQL244K-3R3Z	———	PEAKING COIL	3.3µH K
	D1303	MA111-X	———	CHIP DIODE	
	Q1001	2SC2412K/QR/-X	———	CHIP TRANSISTOR	
	Q1002	2SC2412K/QR/-X	———	CHIP TRANSISTOR	
	Q1871	2SA1037AK/QR/-	———	SI TRANSISTOR	
	Q1872	2SC2412K/QR/-X	———	CHIP TRANSISTOR	
	IC1871	ET417	———	IC (DATA SLICER)	
	IC1872	ET211	———	IC (TELETEXT DEC.)	
	X1871	CE41257-001Z	———	X TAL	

(to be continued)

⚠	REF. NO.	AV-29RS PART No.	AV-29RX(AU) PART No.	PART NAME	DESCRIPTION
■ PRINTED WIRING BOARD PARTS LIST [AV SEL. PWB ASSY] (Page 46-)					
	—	SJK0S003A-H2	**SJK0S004A-H2**	AV SEL. PWB ASSY	
	R0603	NRSA02J-102X	———	CH MG R	1kΩ 1/10W J
	R0606	QRG01GJ-181	———	OM R	180Ω 1W J
	R0607	NRSA02J-123X	———	CH MG R	12kΩ 1/10W J
	R0608	NRSA02J-181X	———	CH MG R	180Ω 1/10W J
	R0609	NRSA02J-123X	———	CH MG R	12kΩ 1/10W J
	R0610	NRSA02J-561X	———	CH MG R	560Ω 1/10W J
	R0628	NRSA02J-0R0X	———	CH MG R	0.0Ω 1/10W J
	R0629	NRSA02J-101X	———	CH MG R	100Ω 1/10W J
	R0630	NRSA02J-101X	———	CH MG R	100Ω 1/10W J
	C0610	NDC21HJ-821X	———	CH C CAP.	820pF 50V J
	C0611	NDC21HJ-470X	———	CH C CAP.	47pF 50V J
	C0612	NDC21HJ-470X	———	CH C CAP.	47pF 50V J
	C0614	NDC21HJ-180X	———	CH C CAP.	18pF 50V J
	C0616	QETN1CM-107Z	———	E CAP.	100µF 16V M
	C0617	NCB21EK-104X	———	CH C CAP.	0.1µF 25V K
	C0618	QETN1HM-106Z	———	E CAP.	10µF 50V M
	C0619	NCB21EK-104X	———	CH C CAP.	0.1µF 25V K
	C0620	QETN1HM-106Z	———	E CAP.	10µF 50V M
	C0623	NCB21EK-104X	———	CH C CAP.	0.1µF 25V K
	C0624	QETN1HM-106Z	———	E CAP.	10µF 50V M
	C0629	QETN1HM-106Z	———	E CAP.	10µF 50V M
	C0630	NCB21HK-102X	———	CH C CAP.	1000pF 50V K
	C0631	NCB21HK-102X	———	CH C CAP.	1000pF 50V K
	C0632	NCB21EK-104X	———	CH C CAP.	0.1µF 25V K
	C0633	QETN1HM-106Z	———	E CAP.	10µF 50V M
	C0634	NCB21HK-103X	———	CH C CAP.	0.01µF 50V K
	C0635	NCB21HK-103X	———	CH C CAP.	0.01µF 50V K
	C0636	NDC21HJ-2R0X	———	CH C CAP.	2.0pF 50V J
	C0642	NDC21HJ-2R0X	———	CH C CAP.	2.0pF 50V J
	C0645	NCB21HK-103X	———	CH C CAP.	0.01µF 50V K
	C0646	NCB21EK-104X	———	CH C CAP.	0.1µF 25V K
	C0647	QETN1CM-107Z	———	E CAP.	100µF 16V M
	C0648	NCB21EK-104X	———	CH C CAP.	0.1µF 25V K
	C0693	NCB21EK-104X	———	CH C CAP.	0.1µF 25V K
	L0601	QQL244K-220Z	———	PEAKING COIL	22µH K
	L0602	QQL244K-180Z	———	PEAKING COIL	18µH K
	L0605	QQL244K-4R7Z	———	PEAKING COIL	4.7µH K

⚠	REF. NO.	AV-29RS PART No.	AV-29RX(AU) PART No.	PART NAME	DESCRIPTION
■ **PRINTED WIRING BOARD PARTS LIST [AV SEL. PWB ASSY]-Continued (Page 46-)**					
	D0601	RD8.2E/B2/-T2	———	ZENER DIODE	
	Q0601	2SC2412K/QR/-X	———	CHIP TRANSISTOR	
	IC0603	MSP3415D-QG-B3	———	IC (ALC)	
	LC0601	CE42482-103Y	———	EMI FILTER	
	X0601	CE42546-001Z	———	X TAL	
■ **PACKING PARTS LIST (Page 48)**					
	1	LC10845-006A-H	**GG10044-017A-H**	PACKING CASE	
	4	RM-C112-2H	**RM-C113-2H**	REMOCON UNIT	
⚠	6	LCT0664-001A-H	**LCT0864-001A-H**	INST BOOK	
	—	———	**BT-56001-2**	WARRANTY	
	—	———	**BT-56002-2**	SERVICE CENTER LIST	

SPECIFICATIONS (Page 2)

Item		CONTENTS
Dimensions (W × H × D)		732mm × 588mm × 508mm
Mass		52kg
TV RF System		B, G, I, D, K, K1, M
Colour System		PAL, SECAM, NTSC3.58, NTSC4.43
Receiving Frequency	**VHF (L)**	46.25MHz ~ 168.25MHz
	VHF (H)	175.25MHz ~ 463.25MHz
	UHF	471.25MHz ~ 863.25MHz
	CATV	Mid (X-Z, S1-S10), Super (S11-S20), Hyper (S21-S41) bands receivable
Intermediate Frequency		
	VIF Carrier	38.0MHz
	SIF Carrier	33.5MHz(4.5MHz), 32.5MHz(5.5MHz), 32.0MHz(6.0MHz), 31.5MHz(6.5MHz)
Colour Sub Carrier Frequency		
	PAL	4.43MHz
	SECAM	4.40625MHz, 4.25MHz
	NTSC	3.58MHz / 4.43MHz
Power Input		AC110 ~ 240V, 50/60Hz
Power Consumption		193W (Max) / 137W (Avg)
Picture Tube		Visible size : 68cm measured diagonally
High Voltage		32.0kV ±1.5kV (at zero beam current)
Speaker & Audio Output		Open dome speaker 10W+10W, 10cm round x 2
Video Audio Input terminals		
Video1	**S-Video**	Y: 1Vp-p positive (Negative sync provided, when terminated with 75Ω) C: 0.286Vp-p (Burst signal, when terminated with 75Ω)
	Video	1Vp-p 75Ω (RCA pin jack)
	Audio (L/R)	500mVrms (–4dBs), High impedance (RCA pin jack)
Video2	**Video**	1Vp-p 75Ω (RCA pin jack)
	Audio (L/R)	500mVrms (–4dBs), High impedance (RCA pin jack)
Video3	**Video/Y**	V: Composite video 1Vp-p 75Ω (RCA pin jack) Y: Component video 1Vp-p 75Ω (RCA pin jack)
	Cb	Component video B-Y 0.7Vp-p 75Ω (RCA pin jack)
	Cr	Component video R-Y 0.7Vp-p 75Ω (RCA pin jack)
	Audio (L/R)	500mVrms (–4dBs), High impedance (RCA pin jack)
Video4 **(Front terminal)**	**S-Video**	Y: 1Vp-p positive (Negative sync provided, when terminated with 75Ω) C: 0.286Vp-p (Burst signal, when terminated with 75Ω)
	Video	1Vp-p 75Ω (RCA pin jack)
	Audio (L/R)	500mVrms (–4dBs), High impedance (RCA pin jack)
Video Audio Output terminal		
	Video	1Vp-p 75Ω (RCA pin jack)
	Audio (L/R)	500mVrms (–4dBs), High impedance (RCA pin jack)
Aerial Input Terminal		75Ω unbalanced, Coaxial
Headphone Jack		Stereo mini jack (ø3.5mm)
AV Compu Link terminal		AV Compu Link II, mini jack (ø3.5mm)
Remote Control Unit		RM-C113 (AA/R06 dry battery × 2)

Design & specifications are subject to change without notice.

SPECIFIC SERVICE INSTRUCTIONS

SETTING OF SYSTEM CONSTANT SET (Page 10)

Table 1

CONTENTS	VARIABLE RANGE	INITIAL SETTING VALUE
COLOUR	→ MULTI → TRIPLE → PAL →	MULTI
MSP	→ YES → NO →	NO
SUPER BASS	→ YES → NO →	NO
CENTER SPEAKER	→ YES → NO →	NO
TEXT	→ YES → NO →	NO
BLUE BACK MUTE	→ YES → NO →	NO
VOLUME LIMIT	→ YES → NO →	YES
COLOUR AUTO	→ YES → NO →	NO
TILT	→ YES → NO →	YES
C-TRAP	→ 1 → 0 →	1
E.M.C.	→ YES → NO →	NO
N/S WHITE BACK	→ YES → NO →	NO
7 LED SPEED	→ 00 → 10 → 20 → ... → 1250 → 1270 ← 1260 ←	100

USER SETTING CONDITIONS (Page 10)

Table 2

PICTURE SETTING		FEATURES	
PICTURE MODE	BRIGHT	SLEEP TIMER	OFF
CONTRAST	CENTER	ON TIMER	PR1 0:00
BRIGHT	CENTER	BLUE BACK	ON
SHARP	CENTER	CHILD LOCK	OFF
COLOUR	CENTER	CHANNEL GUARD	--
TINT	CENTER	AUTO SHUT OFF	OFF
WHITE BALANCE	COOL	VIDEO-3 SETTING	COMPONENT
PICTURE FEATURES		**INSTALL**	
A.A.C	ON	LANGUAGE	ENGLISH
AUTO VNR	AUTO	AUTO PROGRAM	--
COLOUR SYSTEM	TV: According to preset CH	EDIT / MANUAL	PRESET CH only
	VIDEO: AUTO PAL		Others: blank
ZOOM	REGULAR	**DEMO**	
ECO SENSOR	OFF	DEMO	OFF
PICTURE TILT	CENTER	**OTHERS**	
SOUND SETTING		VOLUME	Appropriate sound level
BASS	CENTER	CHANNEL PRESET	Refer to Operating Instructions.
TREBLE	CENTER	CHANNEL POSITION	1 POSITION
BALANCE	CENTER	SUB POWER	ON
AI VOLUME	ON	ON SCREEN DISPLAY	POSITION INDICATION
BBE	ON	TV/VIDEO	TV
SPATIALIZER	OFF	SOUND SYSTEM	B/G

SERVICE ADJUSTMENTS

■ Initial Setting Value

■ SETTING OF VSM PRESET (Page 19)

[INITIAL SETTING VALUES OF VSM PRESET (SUB MENU 5. VSM PRESET)]

ITEM \ PICTURE MODE	BRIGHT	STANDARD	SOFT
1. BRIGHT	+0	+0	+0
2. CONT	+17	+0	–4
3. COLOR	+0	+0	–1
4. SHARP	+0	+0	–3
5. TINT	+0	+0	+0

: Do not adjust.

■ SETTING OF WHITE BALANCE PRESET (Page 20)

[SETTING OF WHITE BALANCE PRESET (SUB MENU 6. WB PRESET)]

ITEM \ WHITE BALANCE	COOL	MID	WARM
1. R DRIVE	0	–3	+26
2. B DRIVE	0	–23	–27

: Do not adjust.

■ VIDEO / CHROMA CIRCUIT ADJUSTMENT (Page 20)

CONTENTS		PAL	SECAM	NTSC 3.58	NTSC 4.43
1. CUTOFF	R	–60			
	G	–60			
	B	–60			
2. DRIVE	R	+0			
	B	+0			
3. BRIGHT	TV	0	+3	+1	—
	VIDEO	–1	+2	+2	—
	COMPONENT	–2			
4. CONT	TV	–15	0	0	—
	VIDEO	0	0	0	—
	COMPONENT	+2			
5. COLOUR	TV / VIDEO	+10	+18	+0	0
	COMPONENT	+8		+17	
6. TINT	TV	+6	+6	+7	0
	VIDEO	+6	+6	+14	0
	COMPONENT	+6		0	
7. BLACK OFFSET	R-Y	—	0	—	—
	B-Y	—	0	—	—
8. SHARP	TV	–14	–13	–12	—
	VIDEO	–8	–7	–9	—
	COMPONENT	–10			

: **Do not adjust.**

Adjustment of SUB COLOUR-II (Page 23)

Adjustment part	Description
5. COLOUR	
PAL COLOUR	Value **(A)** in the figure: Set to –**3V (W & G)**.
SECAM COLOUR	Value **(A)** in the figure: Set to –**5V (W & G)**.
NTSC 3.58 COLOUR	Value **(A)** in the figure: Set to **+3V (W & G)**.

Adjustment of SUB TINT-II (Page 24)

Adjustment part	Description
6. TINT	
NTSC 3.58 TINT	Value **(B)** in the figure: Set to **+4V (W & Cy).**

■ DEFLECTION CIRCUIT ADJUSTMENT (Page 26)

[DEFLECTION ADJUSTMENTS INITIAL SETTING VALUE (SUB MENU 4. DEF)]

Setting item	Adjustment name	Initial setting value					
		REGULAR		ZOOM		16:9	
		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
1. V-SHIFT	Vertical shift	–5	–1	0	+1	0	0
2. V-SIZE	Vertical size	+7	–1	+36	+35	–39	–39
3. SUBTITLE	Subtitle	0	+1	–7	+7	0	0
4. H-CENT	Horizontal center	–10	+5	–1	–1	0	–1
5. H-SIZE	Horizontal size	–12	–1	–4	–4	0	–1
6. EW-PIN	Side pin correction	–3	+1	–4	–4	+2	0
7. TRAPEZ	Trapezoidal distortion correction	+4	–2	0	–1	0	+1
8. EW.COR.L	Corner pin correction Low side	–2	0	–1	–1	+1	+1
9. EW.COR.H	Corner pin correction High side	–2	0	0	0	+1	+1
10. V.S-COR	Vertical size correction	+13	0	0	0	0	0
11. V-LIN	Vertical Linearity	+2	–1	–1	–1	+1	0
12. H-BLK-R	Horizontal Blanking Right	0	0	0	0	+77	0
13. H-BLK-L	Horizontal Blanking Left	0	0	0	0	+2	0
14. V-EHT	V size correction level caused by EHT change	–4	0	0	0	0	0
15. H-EHT	H size correction level caused by EHT change	–3	0	0	0	0	0
16. EHT-GAIN	Size correction gain caused by EHT change	+3	0	0	0	0	0

: Do not adjust.

■ AUDIO CIRCUIT ADJUSTMENT (Page 30)

[AUDIO ADJUSTMENTS INITIAL SETTING VALUE (SUB MENU 3. AUDIO)]

Setting item	Variable range	Fixed value
1. ERROR LIMIT	000H ~ FF0H	100H
2. A2 ID THR	00H ~ FFH	14H
3. BASS	–17 ~ +17	+0
4. TREBLE	–17 ~ +17	+0

: Do not adjust.

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